AIRPORT LAYOUT PLAN FOR

BETHEL AIRPORT

MAY 2005

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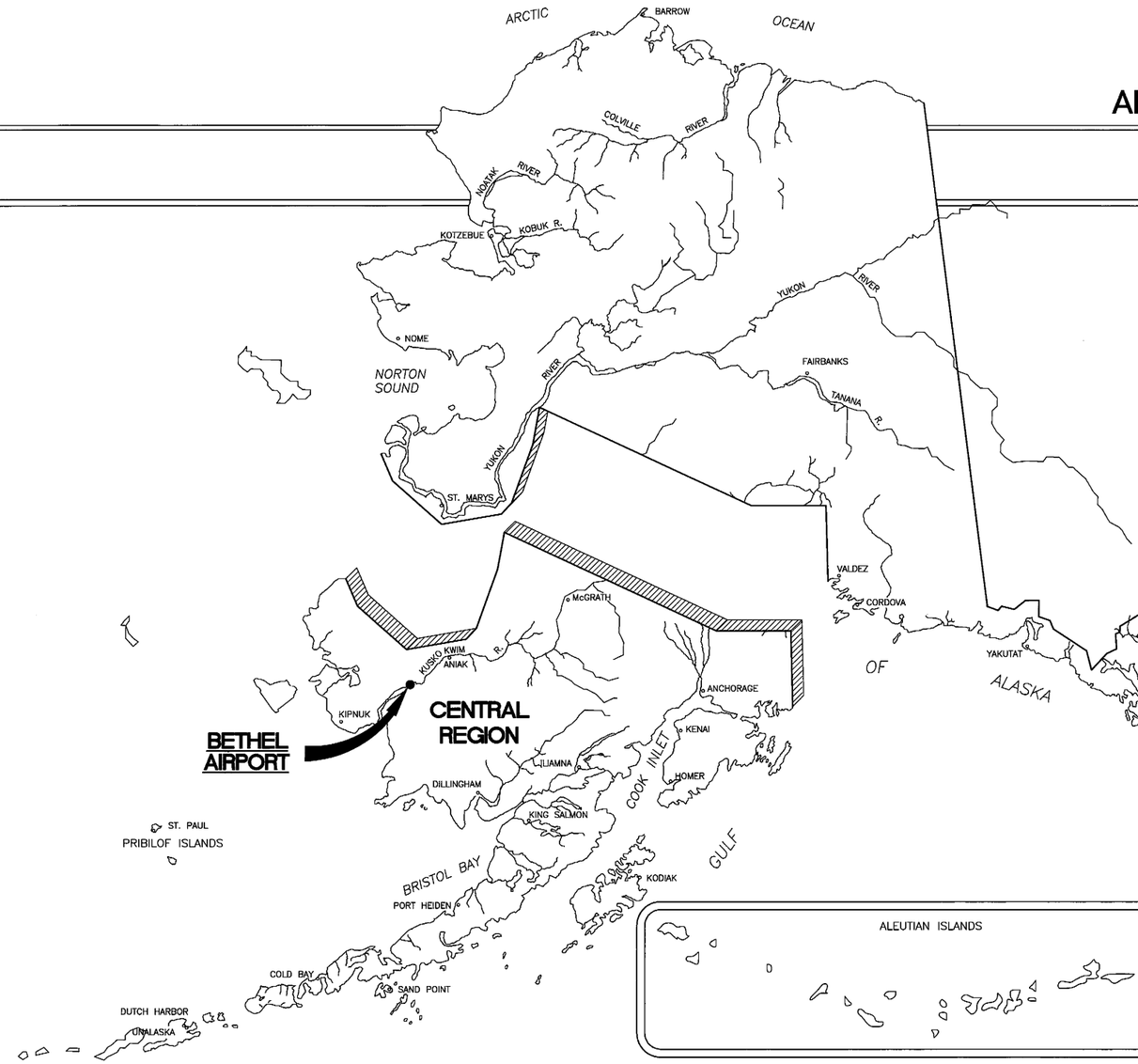
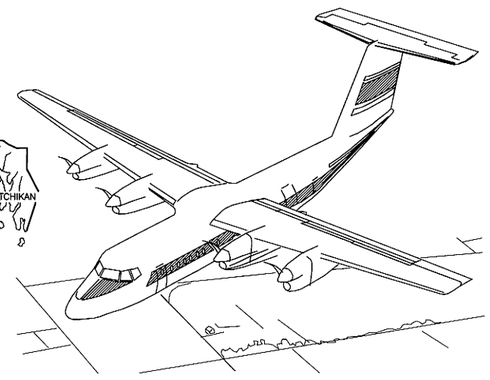




LOCATION MAP

NTS

FAA AIRSPACE #: 04–AAL–211–NRA

SPONSORED BY
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
CENTRAL REGION DESIGN AND CONSTRUCTION

CONCUR _____ DATE 6/21/05
STEVEN R. HORN, P.E. CONSTRUCTION AND OPERATIONS DIRECTOR

APPROVED _____ DATE 6.21.05
ROBERT A. CAMPBELL, P.E. PRECONSTRUCTION ENGINEER

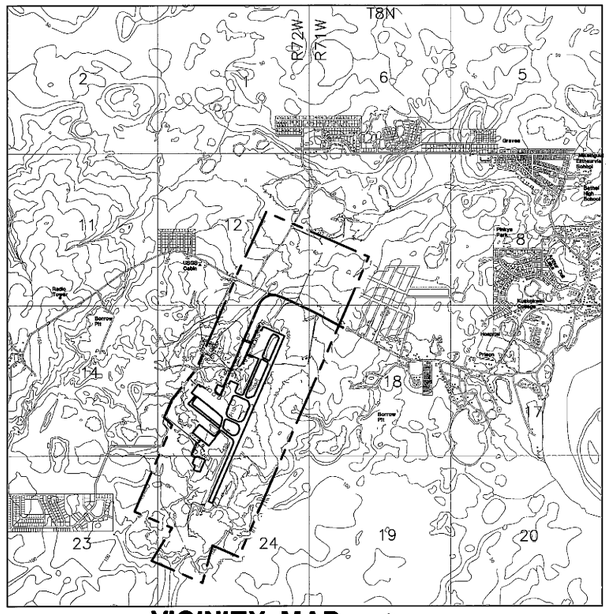
AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL
SUBJECT TO ALP APPROVAL LETTER DATED: 7/13/05
By: _____
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL–600
DATE: 7/13/05

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
COVER SHEET AND INDEX

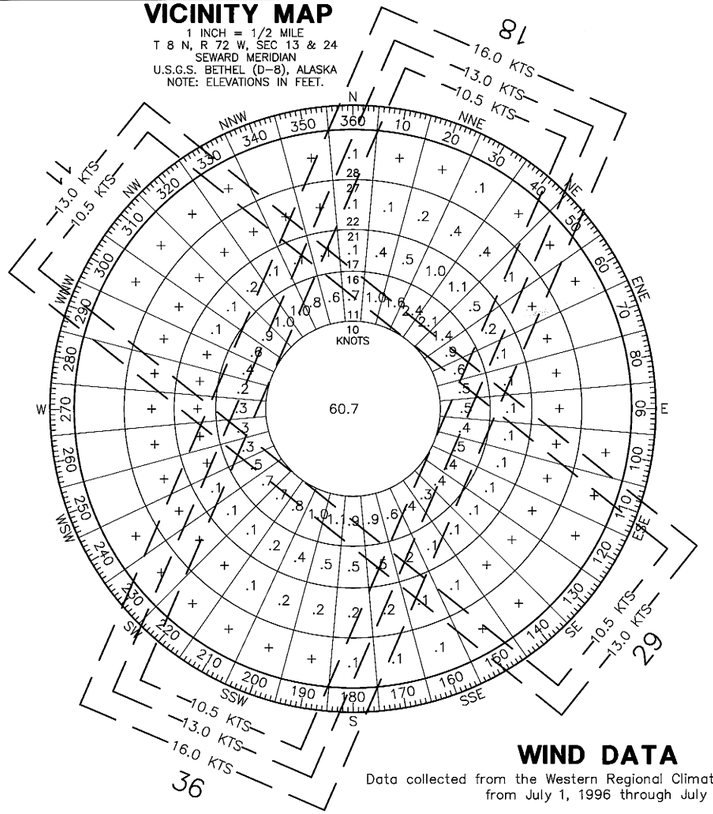
SHEET 1 OF 15

project.04\041147_Civil\4147-COVER, 1=1, 05/04/05 at 09:14 by mxf VIEW: COVER



VICINITY MAP

1 INCH = 1/2 MILE
T 8 N, R 72 W, SEC 13 & 24
SEWARD MERIDIAN
U.S.G.S. BETHEL (D-8), ALASKA
NOTE: ELEVATIONS IN FEET.



WIND DATA

Data collected from the Western Regional Climate Center in Reno, Nevada
from July 1, 1996 through July 29, 2003

RUNWAY DATA TABLE

RUNWAY IDENTIFICATION	RUNWAY 18–36			RUNWAY 1R–19L		RUNWAY 11–29		
	EXISTING (18–36)	ULTIMATE (1L–19R)		ULTIMATE		EXISTING	ULTIMATE
RUNWAY TYPE	OTHER THAN UTILITY	OTHER THAN UTILITY		OTHER THAN UTILITY		UTILITY	UTILITY
RUNWAY END ELEV. (NAVD88, APPROX. MSL)							
RUNWAY END 18 (19R)	97.33 FT	97.33 FT	RUNWAY END 19L	111.95 FT	RUNWAY END 11	120.63 FT	119.63 FT
RUNWAY END 36 (1L)	122.23 FT	122.23 FT	RUNWAY END 1R	117.11 FT	RUNWAY END 29	122.03 FT	108.79 FT
TOUCHDOWN ZONE ELEVATION (NAVD88, APPROX. MSL)							
RUNWAY END 18 (19R)	115.70 FT	115.70 FT	RUNWAY END 19L	119.22 FT	RUNWAY END 11	123.95 FT	119.63 FT
RUNWAY END 36 (1L)	122.30 FT	122.30 FT	RUNWAY END 1R	119.22 FT	RUNWAY END 29	123.95 FT	119.34 FT
RUNWAY GEODETIC POSITIONS (N.A.D. 83)							
RUNWAY END 18 (19R) LAT.	N 60° 47' 16.18"	N 60° 47' 16.18"	RUNWAY END 19L LAT.	N 60° 46' 51.75"	RUNWAY END 11 LAT.	N 60° 46' 52.75"	N 60° 46' 36.87"
RUNWAY END 18 (19R) LONG.	W 161° 49' 45.29"	W 161° 49' 45.29"	RUNWAY END 19L LONG.	W 161° 49' 51.62"	RUNWAY END 11 LONG.	W 161° 50' 51.68"	W 161° 50' 10.90"
RUNWAY END 36 (1L) LAT.	N 60° 46' 18.37"	N 60° 46' 18.37"	RUNWAY END 1R LAT.	N 60° 46' 15.62"	RUNWAY END 29 LAT.	N 60° 46' 41.40"	N 60° 46' 17.23"
RUNWAY END 36 (1L) LONG.	W 161° 50' 36.64"	W 161° 50' 36.64"	RUNWAY END 1R LONG.	W 161° 50' 23.71"	RUNWAY END 29 LONG.	W 161° 50' 22.54"	W 161° 49' 20.51"
THRESHOLD TRUE BEARING							
RUNWAY END 18 (19R)	S 23° 28' 50.87" W	S 23° 28' 50.87" W	RUNWAY END 19L	S 23° 28' 45.42" W	RUNWAY END 11	S 51° 26' 49.57" E	S 51° 26' 14.00" E
RUNWAY END 36 (1L)	N 23° 28' 5.98" E	N 23° 28' 5.98" E	RUNWAY END 1R	N 23° 28' 17.37" E	RUNWAY END 29	N 51° 26' 24.15" W	N 51° 25' 30.06" W
RUNWAY DIMENSION	150' x 6400'	150' x 6400'		75' x 4000'		75' x 1850'	75' x 3200'
RUNWAY SAFETY AREA (RSA) DIM.	300' x 8400'	500' x 8400'		150' x 4600'		150' x 2250'	150' x 3800'
RUNWAY OBJECT FREE AREA (ROFA) DIM.	800' x 8400'	800' x 8400'		500' x 4600'		500' x 2450'	500' x 3800'
APPROACH SURFACE	PRECISION INSTRUMENT	PRECISION INSTRUMENT		NON-PRECISION INSTRUMENT		VISUAL	NON-PRECISION INSTRUMENT
RUNWAY OBSTACLE FREE ZONE (OFZ) DIM.	400' x 6800'	400' x 6800'		250' x 4400'		250' x 2250	250' x 3600'
RUNWAY PROTECTION ZONE (RPZ) DIM.	1000' x 1750' x 2500'	1000' x 1750' x 2500'		1000' x 1510' x 1700'		500' x 700' x 1000'	500' x 700' x 1000'
RUNWAY LIGHTING	HIRL	HIRL		MIRL		MIRL	MIRL
RUNWAY MARKING	PRECISION	PRECISION		NON-PRECISION		NONE	NONE
VISIBILITY MINIMUM	1/2 SM	1/2 SM		≥ 3/4 SM		1 SM	1 SM
VISIBILITY MINIMUM (PROPOSED)	N/A	N/A		> 3/4 SM		N/A	N/A
EFFECTIVE GRADIENT	0.39 %	0.39 %		0.18 %		0.18 %	0.54 %
APPROACH CATEGORY AND DESIGN GROUP	C – III	C – III		B – II		B – II	B – II
WIND COVERAGE	98.0% (16 knots)	98.0% (16 knots)		94.0% (13 knots)		82.9% (13 knots)	82.9% (13 knots)
FAR PART 77 APPROACH SLOPE	50:1	50:1		34:1		20:1	20:1
APPROACH AIDS							
RUNWAY END 18 (19R)	VASI, MALSR, GS, LOC/DME	PAPI, MALSR, GS LOC/DME	RUNWAY END 19L	PAPI, REIL	RUNWAY END 11	NONE	PAPI, REIL
RUNWAY END 36 (1L)	VASI, MALSR, LOC/DME BC, REIL	PAPI, MALSR LOC/DME BC, REIL	RUNWAY END 1R	PAPI, REIL	RUNWAY END 29	NONE	PAPI, REIL
RUNWAY SURFACE	BITUMINOUS	BITUMINOUS		BITUMINOUS		GRAVEL	GRAVEL
PAVEMENT STRENGTH	S 90,000	S 90,000		S 12,500		---	---
	T 112,000	T 112,000		T 30,000		---	---
	TT 210,000	TT 210,000		---		---	---

AIRPORT DATA TABLE

		EXISTING	ULTIMATE
ICAO CODE		PABE	PABE
NATIONAL AIRPORT IDENTIFIER		BET	BET
FAA SITE NUMBER		50061.1	50061.1
AIRPORT ELEVATION (NAVD88, APPROX. MSL) NOTE 1		124.0 FT	122.3 FT
AIRPORT REFERENCE POINT (A.R.P.)	LAT.	N 60° 46' 47"	N 60° 46' 39"
	LONG.	W 161° 50' 17"	W 161° 50' 04"
MAGNETIC DECLINATION (JAN 1, 2005, SOURCE: NGDC)		15° 0' E, CHANGING 0° 11' W/YEAR	
MEAN MAX. TEMPERATURE, HOTTEST MONTH (JULY)		62.0° F	62.0° F
AIRPORT AND TERMINAL NAVIGATIONAL AIDS		VORTAC, LMM, NDB, DF	GPS, WAAS APPROACH CONTROL, VORTAC, NDB, DF
TAXIWAY LIGHTING		MITL	MITL
SURVEY SOURCE AND TYPE		NONE	PIR

NONSTANDARD CONDITIONS

ITEM	STANDARD	EXISTING	ULTIMATE
RUNWAY 18–36 RSA WIDTH	500'	300'	500'
RUNWAY 11 RSA LENGTH BEYOND THRESHOLD	300'	100'	300'
RVR LATERAL DISTANCE TO R/W 18–36 CL	400'	284'	300'

WIND COVERAGE			
	10.5 KTS	13 KTS	16 KTS
RUNWAY 18–36 & 1R–19L	88.9%	94.0%	98.0%
RUNWAY 11–29	74.6%	82.9%	–
COMBINED	97.3%	99.2%	–

LEGEND

ITEM	EXISTING	ULTIMATE
AIRPORT REFERENCE POINT (A.R.P.)	⊙	◎
BUILDING RESTRICTION LINE	— BRL —	— BRL —
CONTOURS		
FENCING	— x —	— x —
LONG TERM DEVELOPMENT (6 TO 20 YEARS)		— — — —
MONUMENTS	⊙	⊙
OBJECT FREE AREA	— OFA —	— OFA —
OBSTACLE FREE ZONE	— OFZ —	— OFZ —
PAPI		■■■■
PROPERTY LINE	— — — —	— — — —
ROADWAYS		
ROTATING BEACON (NDB)		
RUNWAY SAFETY AREA	— — RSA — —	— — RSA — —
WIND CONE AND SEGMENTED CIRCLE		
STRUCTURE		
THRESHOLD LIGHTS	○○○○ ○○○○	○○○○ ○○○○
TREES		
WIND CONE		
HELIPAD	H	H
COMPASS CALIBRATION PAD		

NOTES
1. CONVERSION TO NGVD 29 VERTICAL DATUM −3.58'.
2. AT THE CURRENT MAGNETIC DECLINATION RATE OF CHANGE, RW 11–29 DESIGNATION WILL BECOME 12–30 IN 2015. RUNWAY DESIGNATION 1–19 WILL BECOME 2–20 IN 2043.

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL
SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05

By: _____ DATE: 7/13/05
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 04-AAL-211-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____
H.M. (BUTCH) DOUTHIT, P.E. — DESIGN SECTION CHIEF

APPROVED: _____
H.M. (BUTCH) DOUTHIT, P.E. — PROJECT MANAGER

DATE _____
DESIGN MF
DRAWN JWF
CHECKED _____

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
VICINITY MAP AND DATA TABLES

SHEET 2 OF 15

Date Plotted:
Plot Ratio and Layout:
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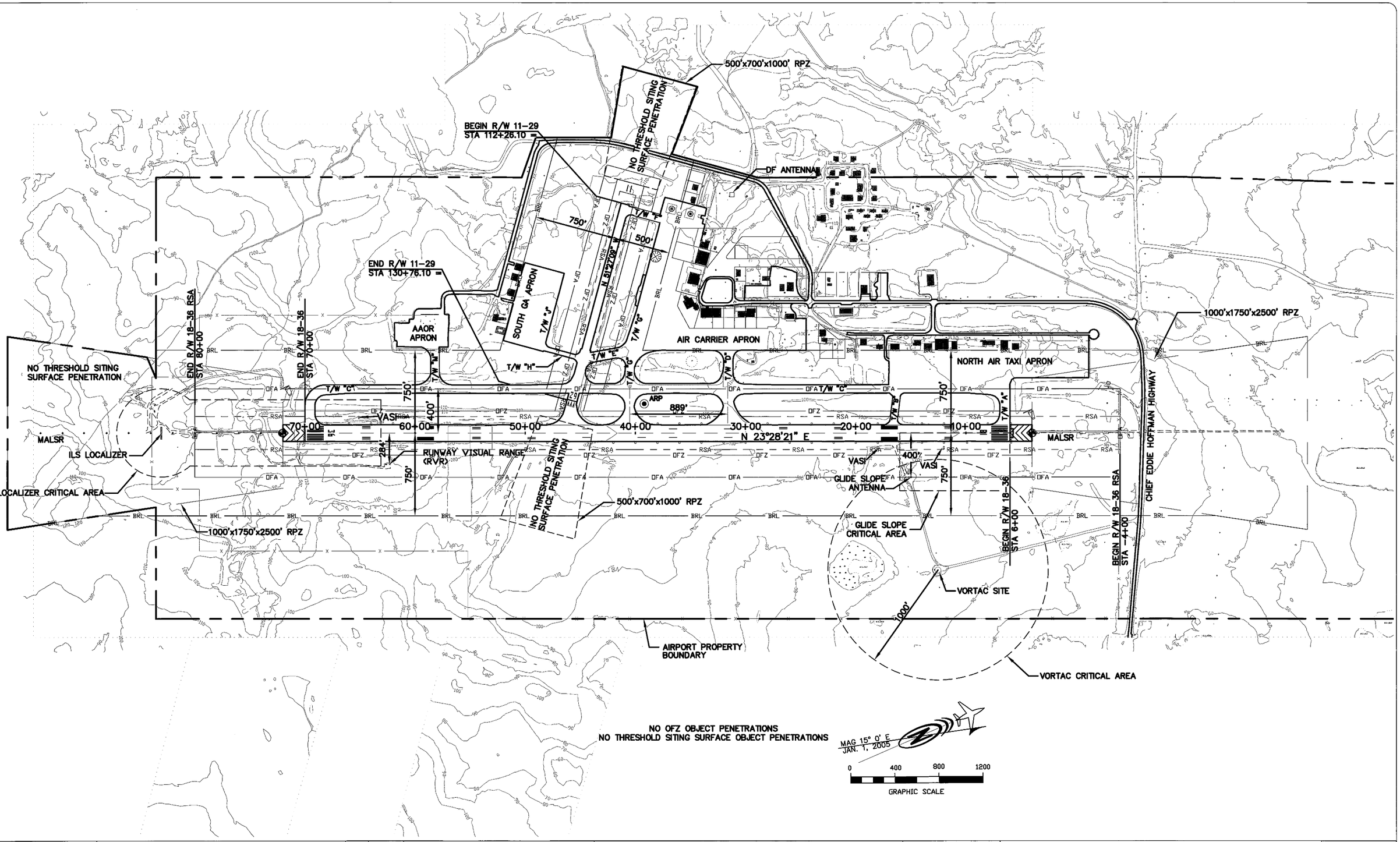

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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL
SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05

By: _____ DATE: 7/13/05
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 04-AAL-211-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____ DESIGN SECTION CHIEF
H.M. (BUTCH) DONTHIT, P.E.

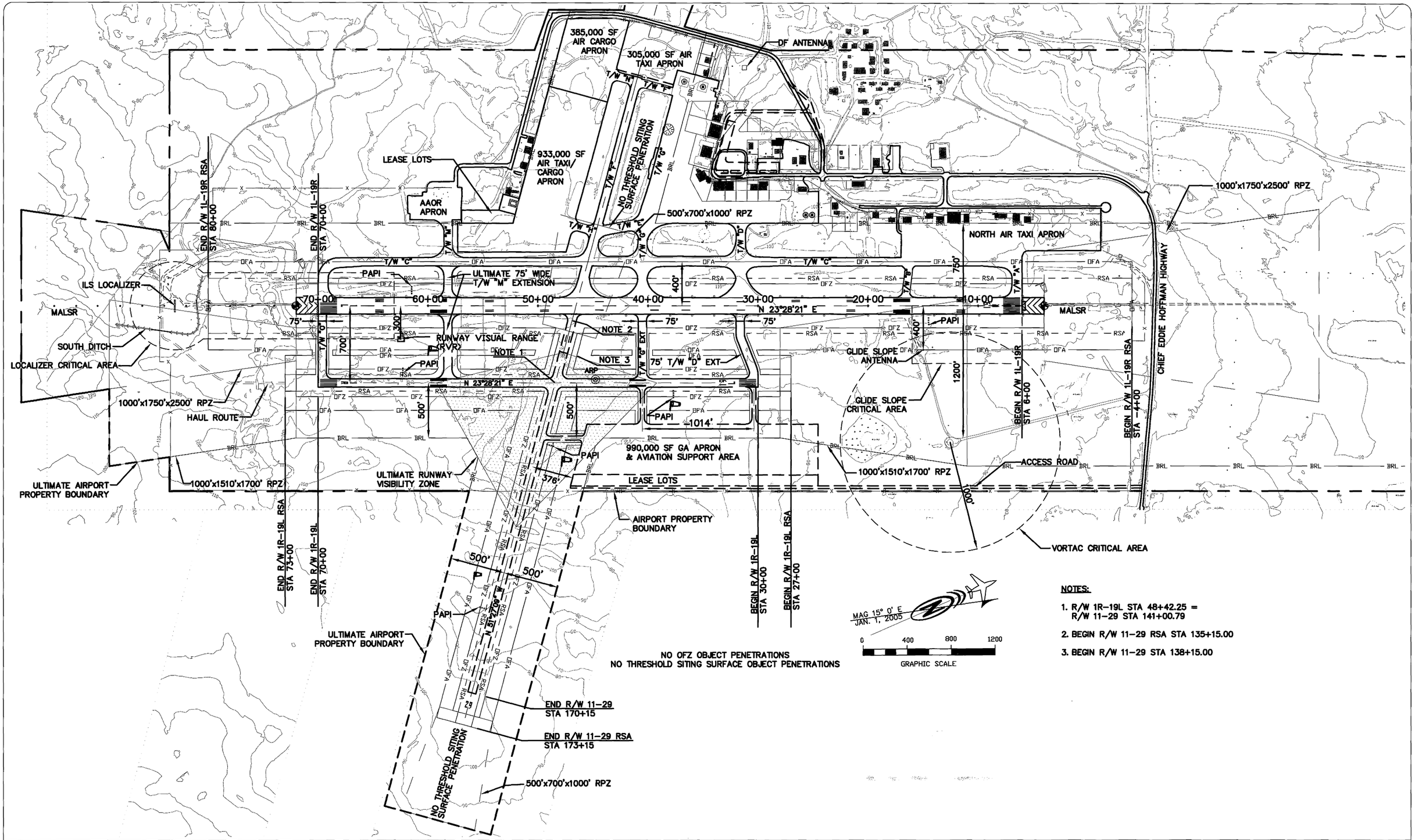
APPROVED: _____ PROJECT MANAGER
H.M. (BUTCH) DONTHIT, P.E.

DATE _____
DESIGN MF
DRAWN JWF
CHECKED _____

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
PLAN VIEW – EXISTING

SHEET 3 OF 15



NOTES:

1. R/W 1R-19L STA 48+42.25 = R/W 11-29 STA 141+00.79
2. BEGIN R/W 11-29 RSA STA 135+15.00
3. BEGIN R/W 11-29 STA 138+15.00

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Plot Ratio and Layout:
File:
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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05

By: _____ DATE: 7/13/05
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 04-AAL-211-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____
H.M. (BUTCH) DOUGHIT, P.E. DESIGN SECTION CHIEF

APPROVED: _____
H.M. (BUTCH) DOUGHIT, P.E. PROJECT MANAGER

DATE _____
DESIGN MF
DRAWN JWF
CHECKED _____

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
PLAN VIEW – ULTIMATE

SHEET 4 OF 15

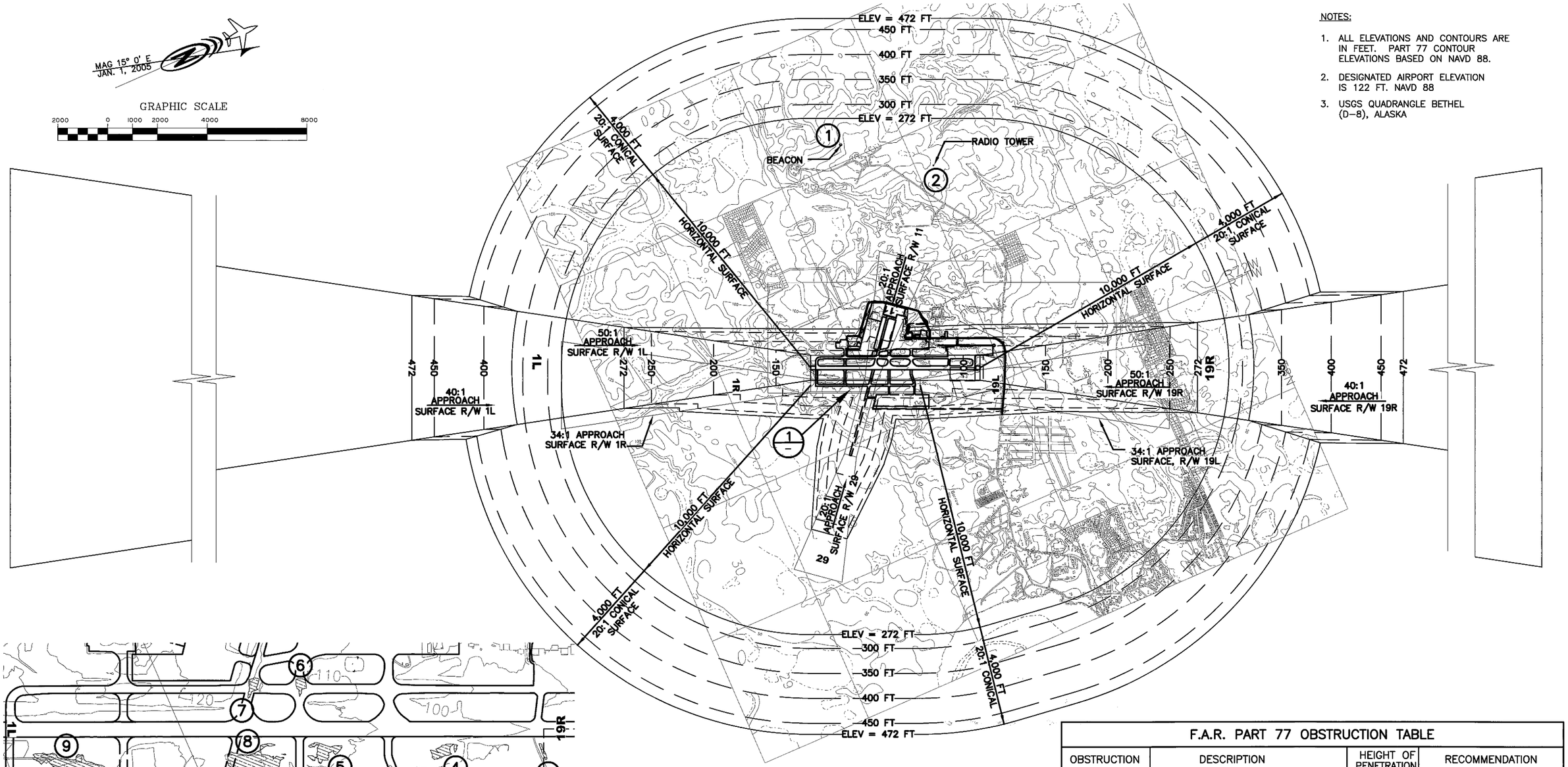
MAG 15° 0' E
JAN. 1, 2005

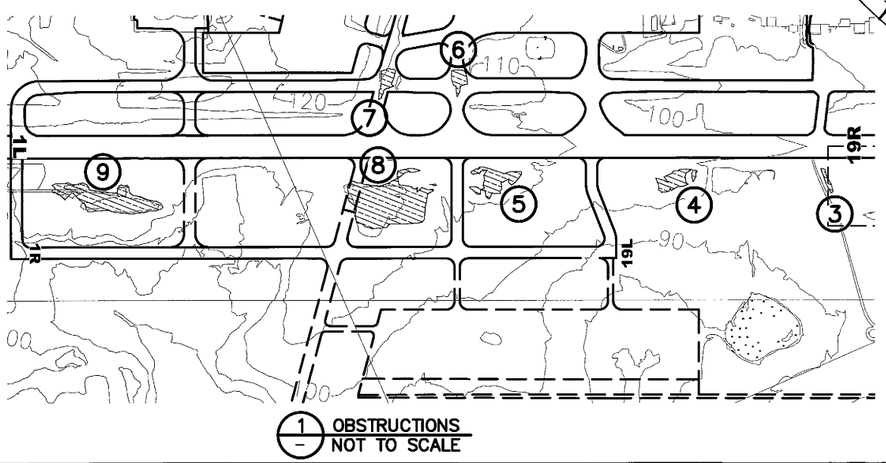
GRAPHIC SCALE

2000 0 1000 2000 4000 8000

NOTES:

1. ALL ELEVATIONS AND CONTOURS ARE IN FEET. PART 77 CONTOUR ELEVATIONS BASED ON NAVD 88.
2. DESIGNATED AIRPORT ELEVATION IS 122 FT. NAVD 88
3. USGS QUADRANGLE BETHEL (D-8), ALASKA





F.A.R. PART 77 OBSTRUCTION TABLE

OBSTRUCTION	DESCRIPTION	HEIGHT OF PENETRATION	RECOMMENDATION
①	OSCARVILLE NONDIRECTIONAL BEACON (LIGHTED)	22.2 FT	TO REMAIN
②	RADIO TOWER (LIGHTED)	108.2 FT	TO REMAIN
③	GROUND OBSTRUCTION	0-1.5 FT	WILL BE REMOVED DURING 2005/2006 CONSTRUCTION.
④	GROUND OBSTRUCTION	0-0.5 FT	
⑤	GROUND OBSTRUCTION	0-0.75 FT	
⑥	T/W "G" OBSTRUCTION	0-1.0 FT	TO REMAIN
⑦	R/W 11-29 OBSTRUCTION	0-1.5 FT	TO REMAIN
⑧	GROUND OBSTRUCTION	0-6.5 FT	GROUND OBSTRUCTIONS WILL BE REMOVED DURING 2005/2006 CONSTRUCTION. RVR PAD WILL REMAIN DURING NEAR-TERM.
⑨	RVR PAD & GROUND OBSTRUCTION	0-7.5 FT	

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05

By: _____ DATE: 7/13/05
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 04-AAL-211-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____ DESIGN SECTION CHIEF
H.M. (BUTCH) DOUTHIT, P.E.

APPROVED: for _____ PROJECT MANAGER
H.M. (BUTCH) DOUTHIT, P.E.

DATE
DESIGN MF
DRAWN JWF
CHECKED

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
AIRSPACE F.A.R. PART 77

SHEET 5 OF 15

Date Plotted: 06/07/05 at 15:01 by cdb
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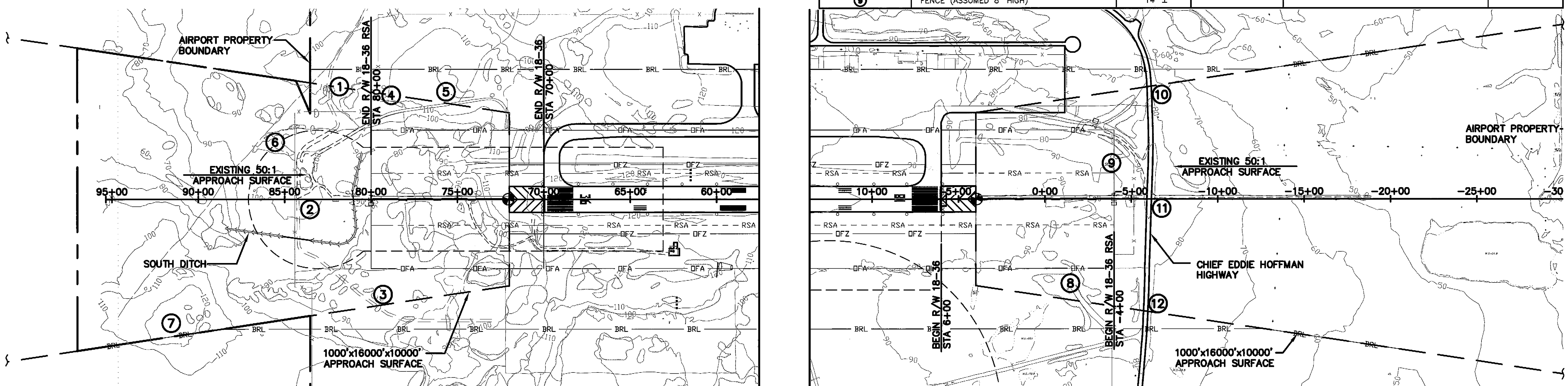
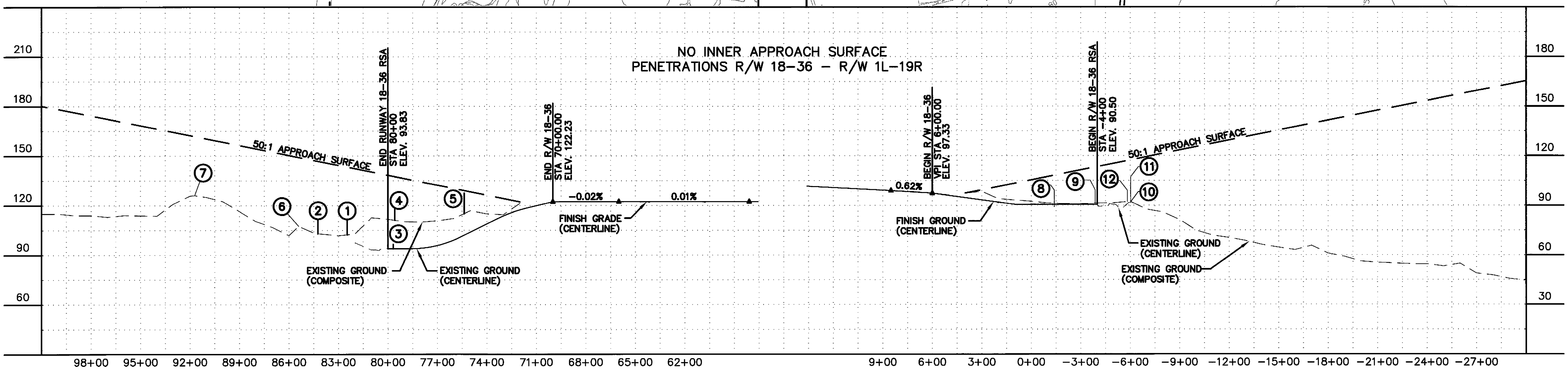
OBJECTS WITHIN APPROACH SURFACE

NO	DESCRIPTION	HEIGHT OF CLEARANCE	NO	DESCRIPTION	HEIGHT OF CLEARANCE
1	10' ABOVE HAUL ROUTE	32' ±	10	15' ABOVE CHIEF EDDIE HOFFMAN HWY	25' ±
2	10' ABOVE HAUL ROUTE	35' ±	11	15' ABOVE CHIEF EDDIE HOFFMAN HWY	10' ±
3	10' ABOVE HAUL ROUTE	41' ±	12	15' ABOVE CHIEF EDDIE HOFFMAN HWY	18' ±
4	FENCE (ASSUMED 8' HIGH)	19' ±			
5	10' ABOVE ROAD	1' ±			
6	BLUFF	41' ±			
7	BLUFF	35' ±			
8	10' ABOVE GRAVEL ROAD	9' ±			
9	FENCE (ASSUMED 8' HIGH)	14' ±			





AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05

By: [signature] DATE: 7/13/05

FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 04-AAL-211-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature]
H.M. (BUTCH) DOUTHIT, P.E. DESIGN SECTION CHIEF

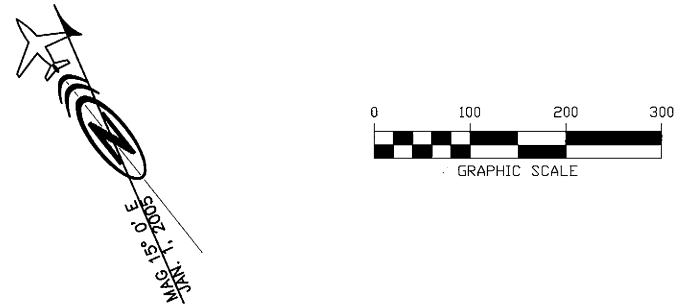
APPROVED: [signature]
H.M. (BUTCH) DOUTHIT, P.E. PROJECT MANAGER

DATE ____
DESIGN MF
DRAWN JWF
CHECKED ____

BETHEL AIRPORT

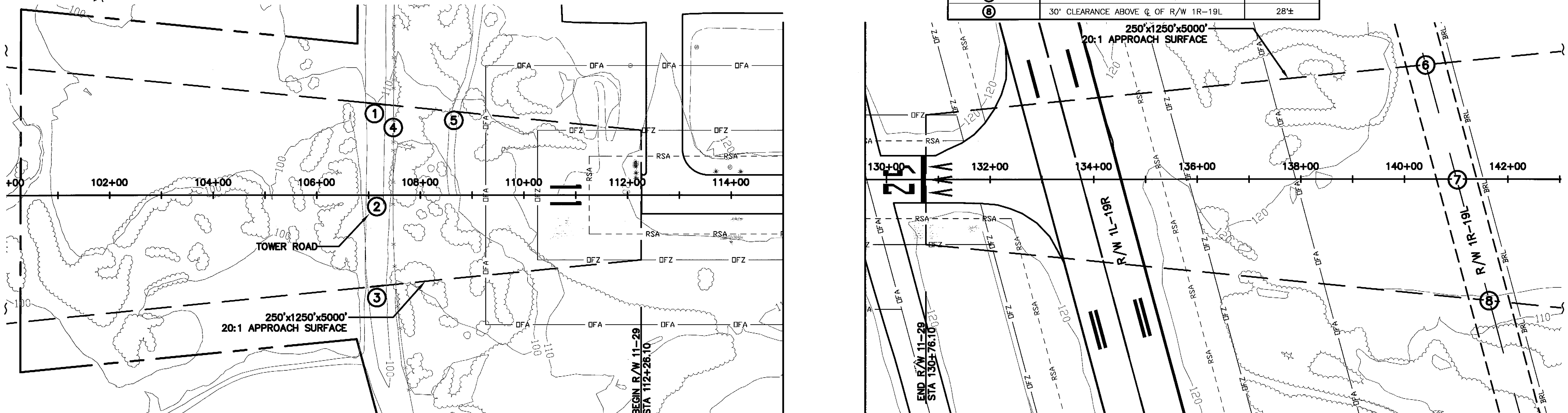
AIRPORT LAYOUT PLAN
INNER APPROACH SURFACES
EXISTING R/W 18-36 & ULTIMATE R/W 1L-19R

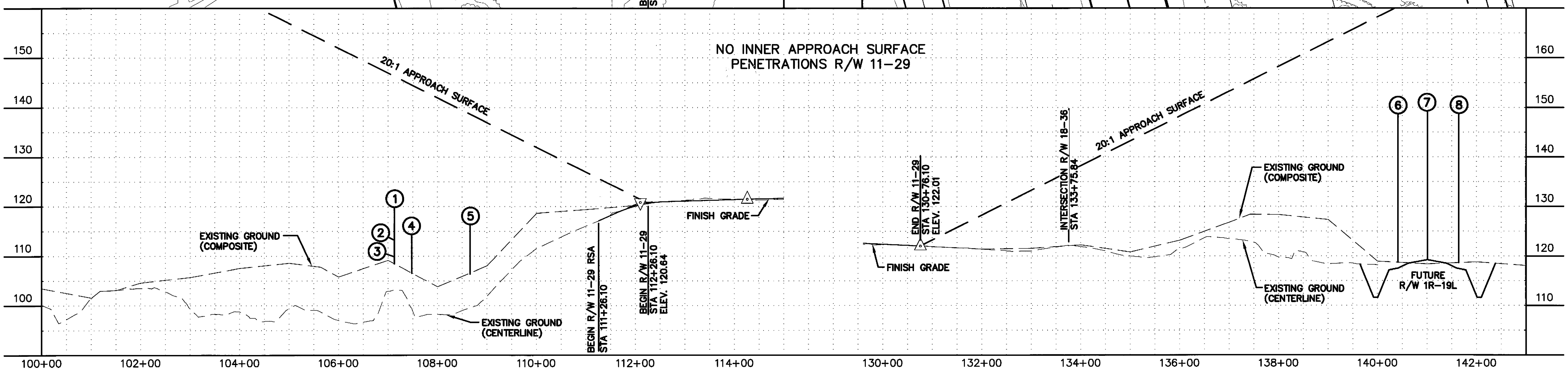
SHEET 6 OF 15



OBJECTS WITHIN APPROACH SURFACE

NO.	DESCRIPTION	HEIGHT OF CLEARANCE
1	10' CLEARANCE ABOVE ℄ OF TOWER ROAD	26'±
2	10' CLEARANCE ABOVE ℄ OF TOWER ROAD	33'±
3	10' CLEARANCE ABOVE ℄ OF TOWER ROAD	36'±
4	8' (ASSUMED) FENCE	30'±
5	10' CLEARANCE ABOVE ℄ OF ACCESS ROAD	22'±
6	30' CLEARANCE ABOVE ℄ OF R/W 1R–19L	22'±
7	30' CLEARANCE ABOVE ℄ OF R/W 1R–19L	24'±
8	30' CLEARANCE ABOVE ℄ OF R/W 1R–19L	28'±





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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL
SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05

By: [signature] DATE: 7/13/05
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL–600

F.A.A. AIRSPACE REVIEW NUMBER: 04–AAL–211–NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature]
H.M. (BUTCH) DOUTHIT, P.E. DESIGN SECTION CHIEF

APPROVED: [signature]
H.M. (BUTCH) DOUTHIT, P.E. PROJECT MANAGER

DATE ____
DESIGN MF
DRAWN JWF
CHECKED ____

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
INNER APPROACH SURFACES
EXISTING R/W 11–29

SHEET 7 OF 15

Date Plotted: | VIEW: blahblah, PLOT-EXIST, PLOT-FUT, PLOT-ULT
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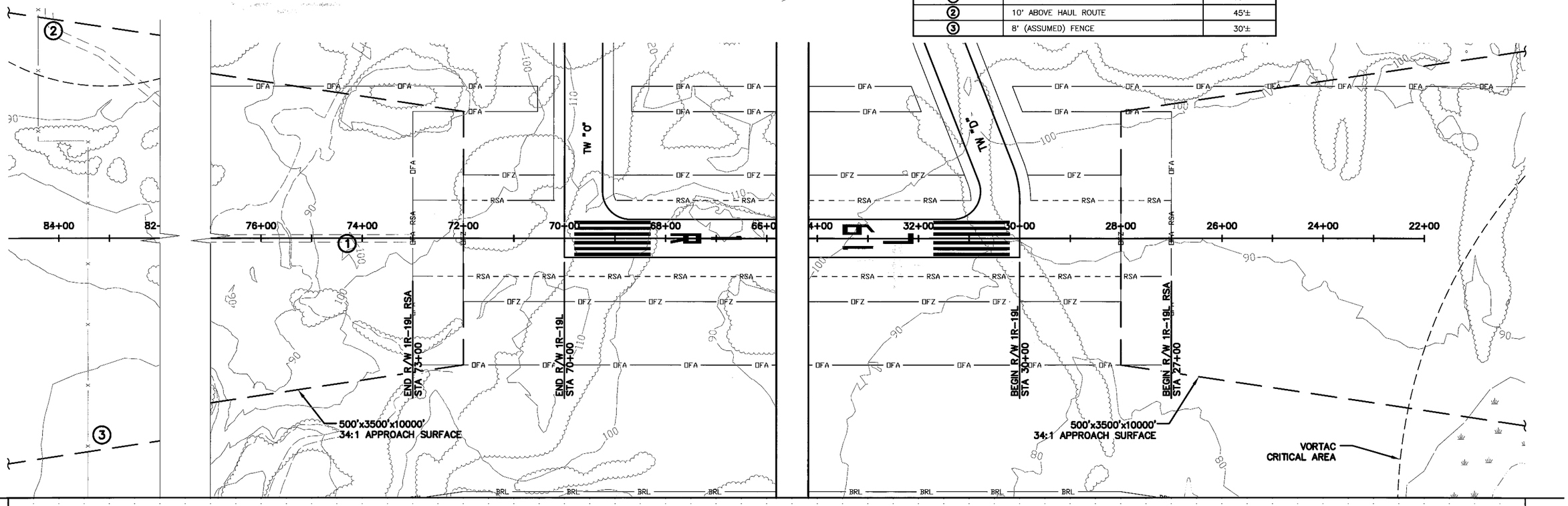
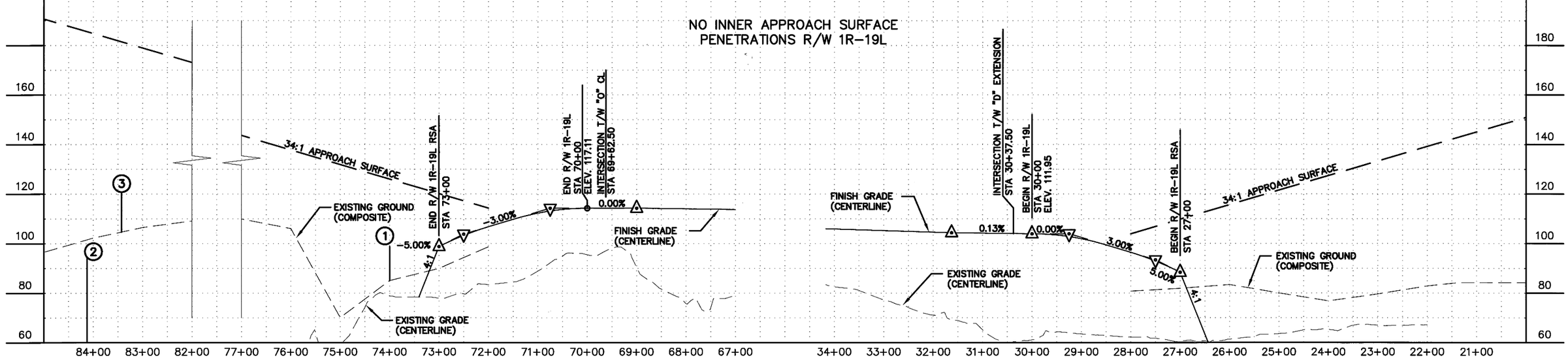
0 100 200 300
GRAPHIC SCALE

MAG 15° 0' E
JAN. 1, 2005

OBJECTS WITHIN APPROACH SURFACE		
NO.	DESCRIPTION	HEIGHT OF CLEARANCE
①	10' ABOVE HAUL ROUTE	13'±
②	10' ABOVE HAUL ROUTE	45'±
③	8' (ASSUMED) FENCE	30'±





AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05
By: _____ DATE: 7/13/05
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 04-AAL-211-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____
H.M. (BUTCH) DOUGHIT, P.E. DESIGN SECTION CHIEF

APPROVED: _____
H.M. (BUTCH) DOUGHIT, P.E. PROJECT MANAGER

DATE _____
DESIGN MF
DRAWN JWF
CHECKED _____

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
INNER APPROACH SURFACES
ULTIMATE R/W 1R-19L

SHEET 8 OF 15

Date Plotted: | VIEW: blahblah, PLOT-EXIST, PLOT-FUT, PLOT-ULT
Plot Ratio and Layout: | XREF: 3218AERIAL, 4147-BD02, 4147DESIGN, 4147SURVEY
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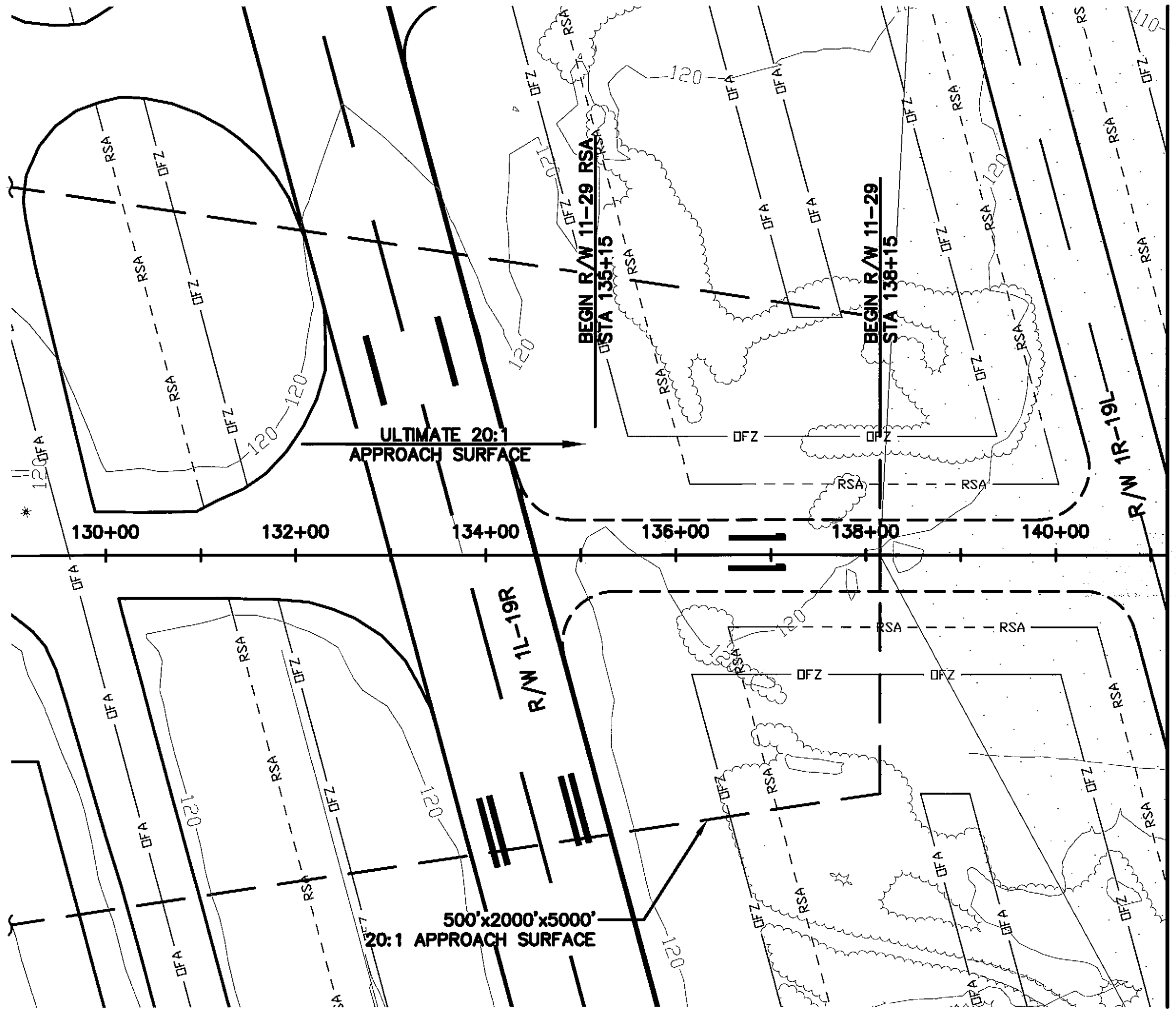

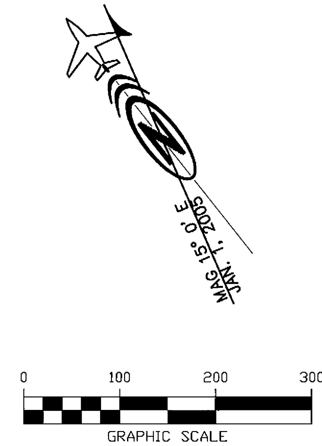

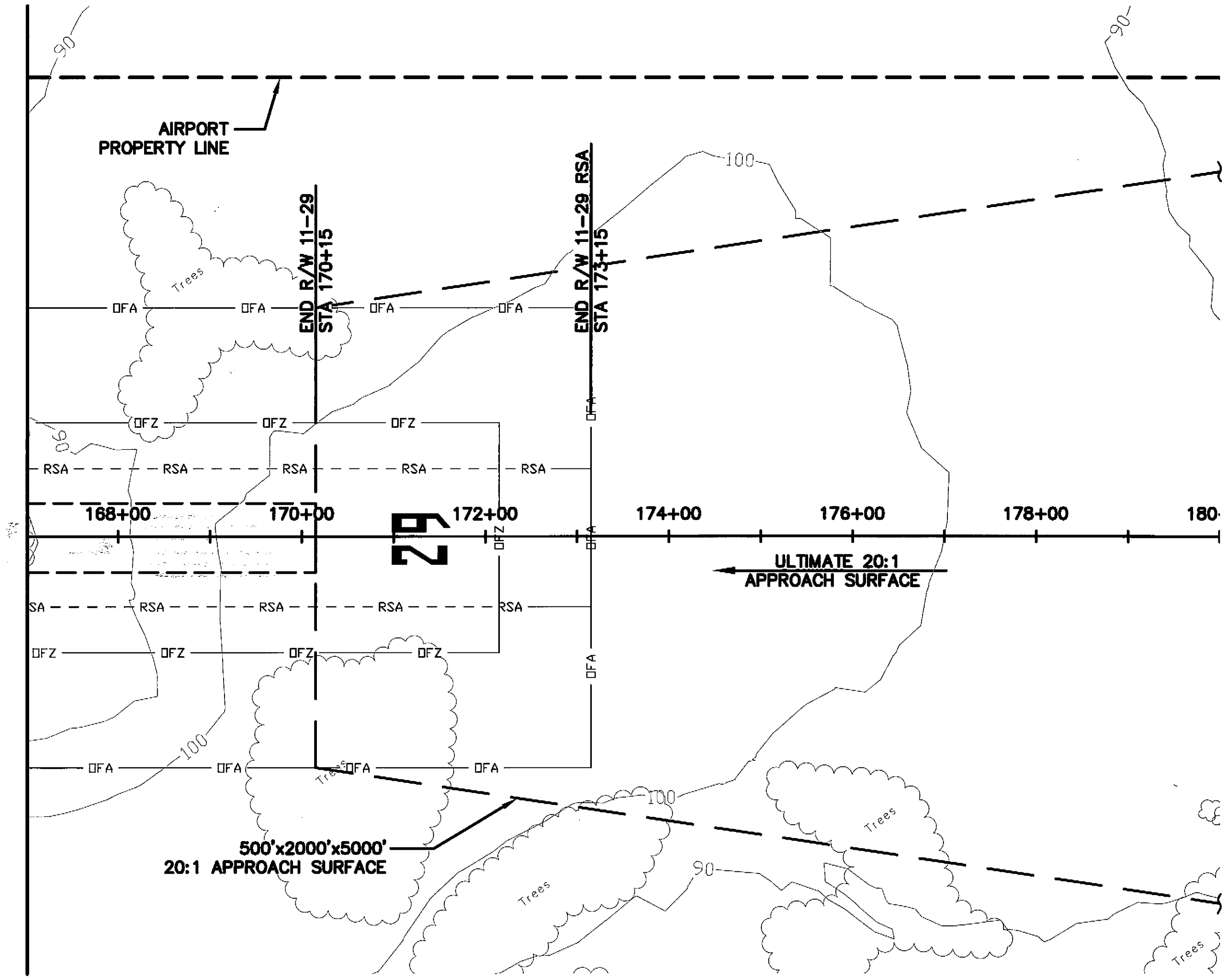

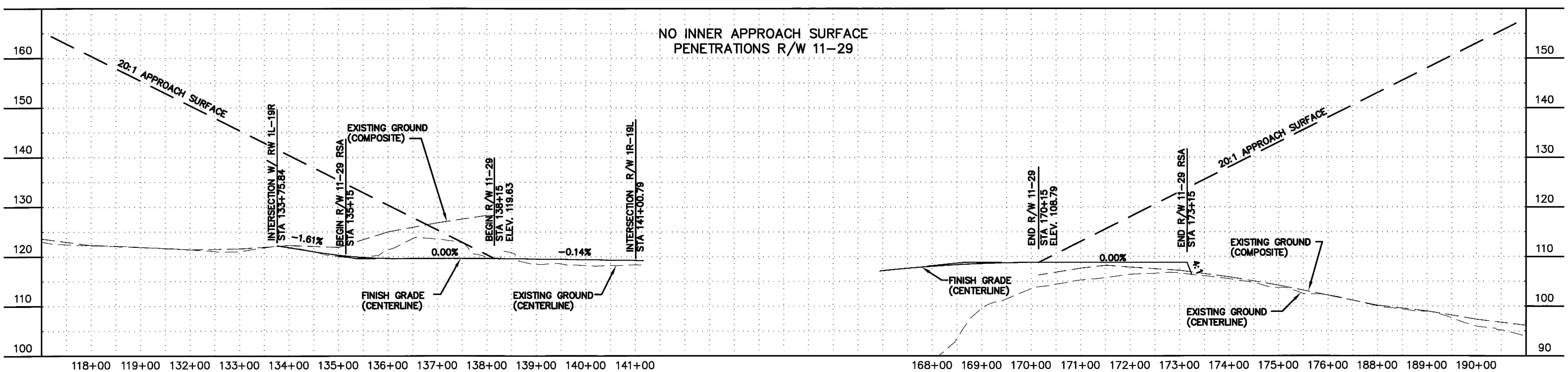

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05

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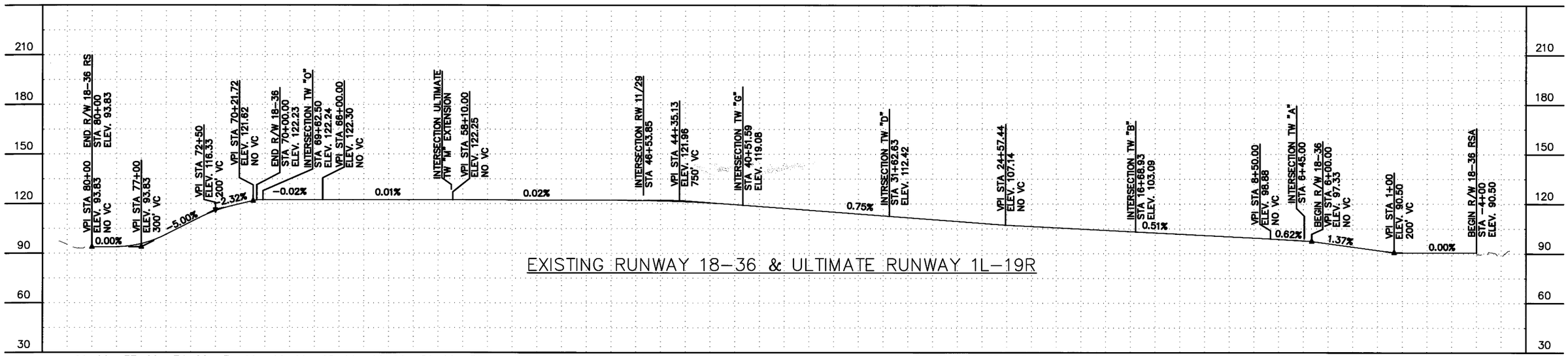
APPROVED: for [signature]
H.M. (BUTCH) DOUTHIT, P.E. — PROJECT MANAGER

DATE ______
DESIGN MF
DRAWN JWF
CHECKED ______

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
INNER APPROACH SURFACES
ULTIMATE RUNWAY 11-29

SHEET 9 OF 15



EXISTING RUNWAY 18-36 & ULTIMATE RUNWAY 1L-19R

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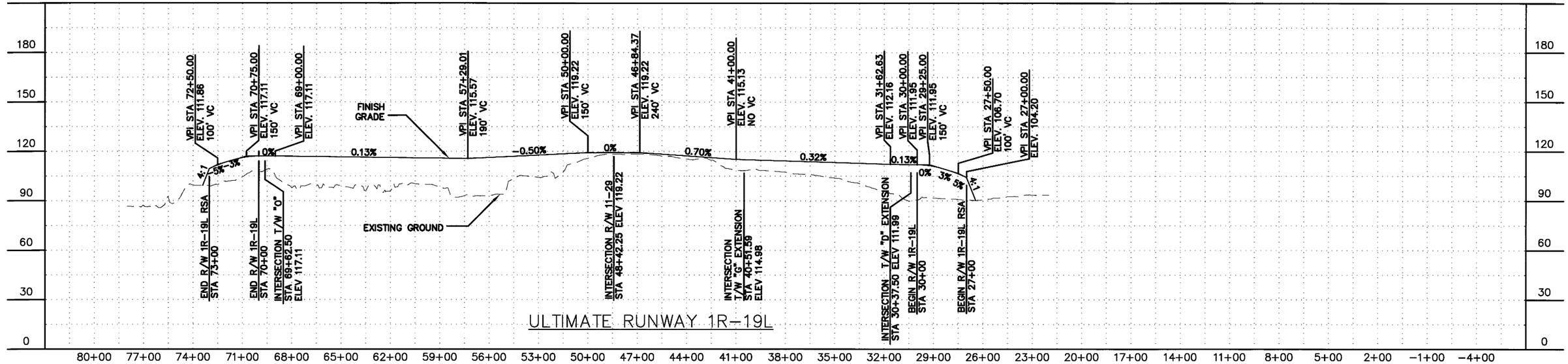
GRAPHIC SCALE



ULTIMATE RUNWAY 1R-19L

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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL
SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05

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ALASKAN REGION, AAL-600

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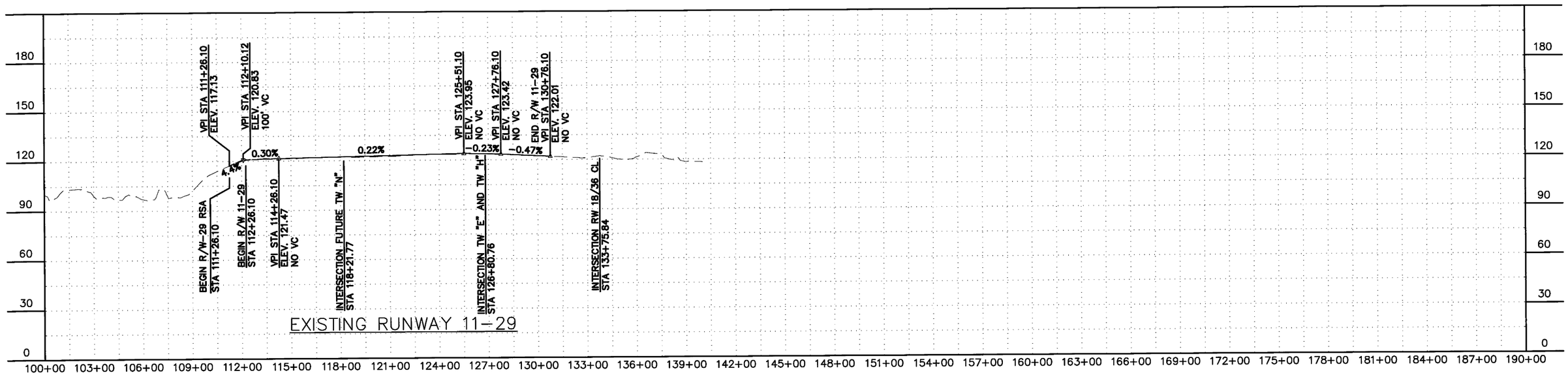
H.M. (BUTCH) DOUTHIT, P.E. PROJECT MANAGER

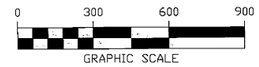
DATE _____
DESIGN JBR
DRAWN JWF
CHECKED _____

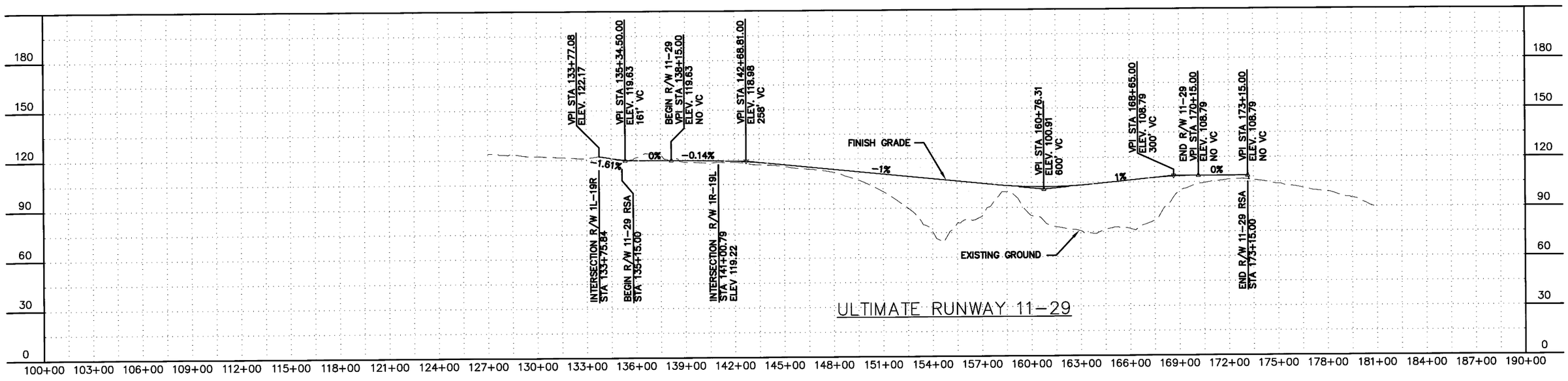
BETHEL AIRPORT

AIRPORT LAYOUT PLAN
PROFILE
EXISTING R/W 18-36 & ULTIMATE R/W 1R-19L

SHEET 10 OF 15







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AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL 7/13/05
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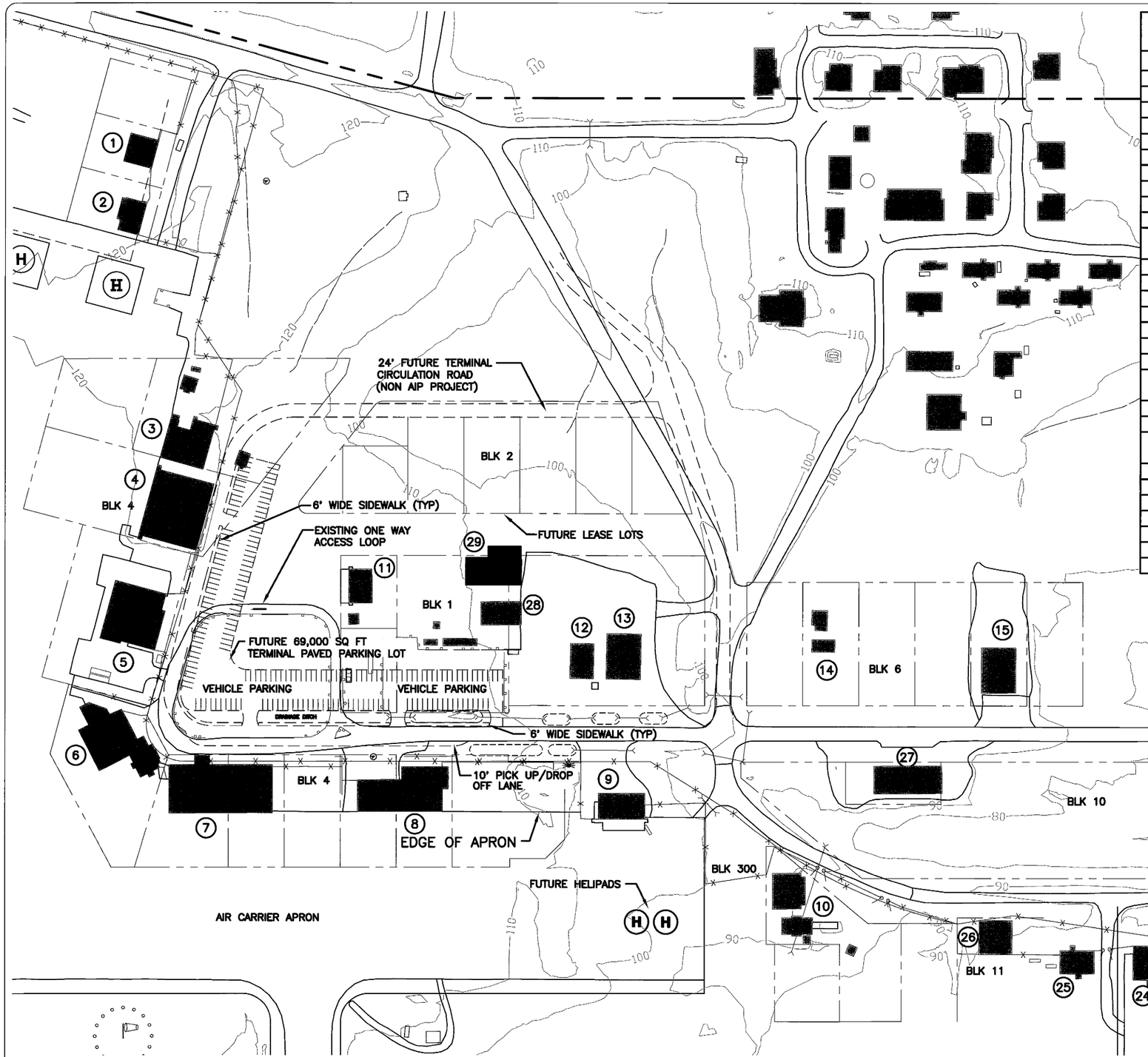
APPROVED: For _____
H.M. (BUTCH) DOUTHIT, P.E. PROJECT MANAGER

DATE
DESIGN JBR
DRAWN JWF
CHECKED

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
PROFILE
EXISTING R/W 11-29 & ULTIMATE R/W 11-29

SHEET 11 OF 15



TERMINAL AREA OCCUPANCY TABLE

No.	DESCRIPTION	LOT	BLOCK	COMMENT
1	KUSKO AVIATION, INC.	2	400	---
2	CHARTERCRAFT LEASING & SALES, INC.	1	400	---
3	VILLAGE AVIATION, INC.	12B	4	---
4	FLIGHT ALASKA, INC.	11E	4	---
5	E2R, LLC	10C	4	---
6	SWAN BAY HOLDINGS, INC.	8C	4	---
7	LEFNER INVESTMENTS, INC.	6A/7A	4	---
8	ALASKA AIRLINES, INC.	2C/3B/4A	4	---
9	DOT/PF ARFF	---	300	---
10	DOYLE, MONTE	1B	11	---
11	FAULKNER, FERN dba EMERALD CAR RENTAL	1C	1	---
12	DOT/PF MAINTENANCE	1	3	---
13	DOT/PF MAINTENANCE	1	3	---
14	US DEPT. OF COMMERCE, NWS	2	6	---
15	D&G EXPRESS, INC.	5	6	---
16	ALASKA DEPT. OF PUBLIC SAFETY	1	9	---
17	GUSSIC VENTURES, INC.	8A	7	---
18	HAGELAND AVIATION SERVICES, INC.	7A	7	---
19	CYNTHIA ANDRECHECK & THOMAS RATLEDGE	6A	7	---
20	HANGER ONE, INC.	4D	7	---
21	ALASKA DEPT. OF PUBLIC SAFETY	3B	7	---
22	U.S. DEPT. OF INTERIOR FISH AND WILDLIFE SERVICE	3C	7	---
23	GRANT AVIATION	2A	7	---
24	BETHEL BUILDING GROUP, LLC	1C	7	---
25	YUUT YAQUNGVIAT, LLC	2C	11	---
26	YUUT YAQUNGVIAT, LLC	4	11	---
27	DOYLE, MONTE	1	10	---
28	SAND STORAGE BUILDING	1B	1	---
29	ULTIMATE SAND STORAGE BUILDING	1B	1	---

Date Plotted:
Plot Ratio and Layout:
File: VIEW: -01_jl_5000, PI, pdf-plt XREF: 4147-B001, 4147AERIAL
project:04\241147_Civil\4147-TERMINAL, 1=1, 06/07/05 at 15:22 by dob

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL
SUBJECT TO ALP APPROVAL LETTER DATED 7/18/05
By: _____ DATE: 7/13/05
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 04-AAL-211-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____
H.M. (BUTCH) DOUVIT, P.E. DESIGN SECTION CHIEF

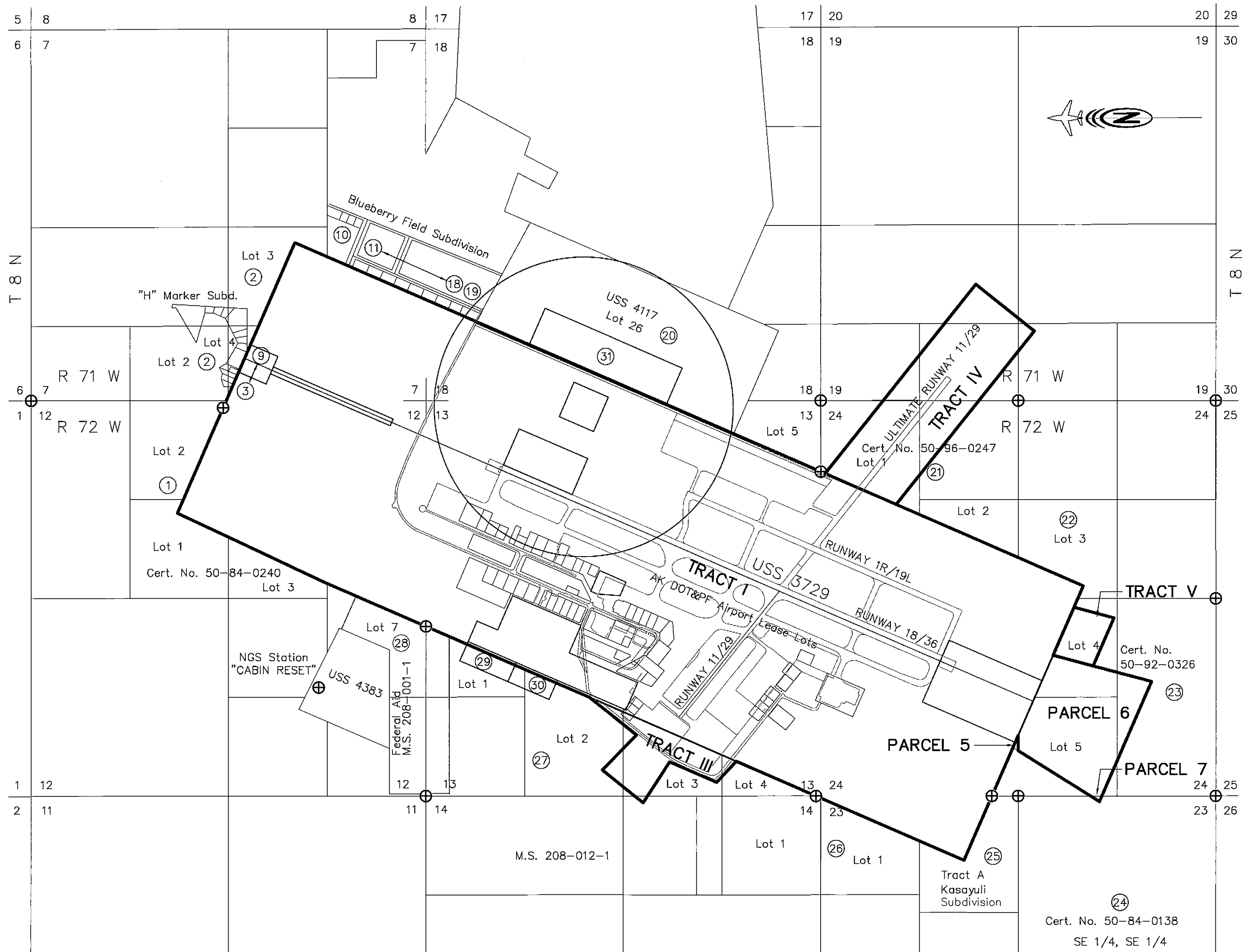
APPROVED: _____
H.M. (BUTCH) DOUVIT, P.E. PROJECT MANAGER

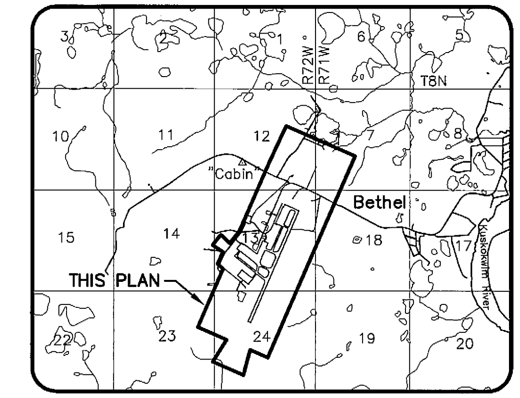
DATE _____
DESIGN MF
DRAWN JWF
CHECKED _____

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
TERMINAL AREA PLAN

SHEET 12 OF 15





VICINITY MAP

SCALE = 1:63360
USGS Map BETHEL (D-8)
Surveyed T 8 N, R 71&72 W, S.M.
Bethel Recording District

LEGEND

81.01'	Distance in U.S. Feet
⊕	Recovered Primary Monument
(18)	Property Ownership Identification Number
	Airport Boundary
	Ultimate Airport Boundary
	Tract Boundary

No.	Adjacent Property Owner / Parcel (Document)
1	Heirs of Lucy Polk / Lots 1–3, S12, T8N, R72W, S.M. (Certificate No. 50–84–0240)
2	Bethel Native Corp. / Remainders of Lots 2–4, S7, T8N, R71W, S.M. (I.C. No. 142)
3	Roger S. Young / Lot 1, Tract B–1, "H" Marker Subd. (Bk 73, Pg 121, B.R.D.)
4	Edward S. Grifka / Lot 2, Tract B–1, "H" Marker Subd. (Bk 68, Pg 807, B.R.D.)
5	Daniel Osentoski / Lot 3, Tract B–1, "H" Marker Subd. (Bk 77, Pg 463–464, B.R.D.)
6	Howard C. Pavil, Jr. / Lot 4B1, Tract B–1, "H" Marker Subd. (Bk 81, Pg 23–28, B.R.D.)
7	Michael & Valerie Warzewick / Lot 5A, Tract B–1, "H" Marker Subd. (Bk 78, Pg 332–333, B.R.D.)
8	Glen D. Gunder / Lot 5B, Tract B–1, "H" Marker Subd. (Bk 82, Pg 86, B.R.D.)
9	Billy & Margaret McCann / Lot 6, Tract B–1, "H" Marker Subd. (Bk 34, Pg 276, B.R.D.)
10	Janet S. Shantz Kaiser / Lot D–33A, Blueberry Field Subd. (Plat 98–15, B.R.D.)
	Patrick F. Martinez / Lot D–33A, Blueberry Field Subd. (Plat 98–15, B.R.D.)
	Patricia E. Martinez / Lot D–33A, Blueberry Field Subd. (Plat 98–15, B.R.D.)
	Karl R. Powers / Lot D–33A, Blueberry Field Subd. (Plat 98–15, B.R.D.)
	Andrea Z. Powers / Lot D–33A, Blueberry Field Subd. (Plat 98–15, B.R.D.)
11	Christina J. Shantz / Lot D–32, Blueberry Field Subd. (Plat 84–9, B.R.D.)
12	Christina J. Shantz / Lot D–31, Blueberry Field Subd. (Plat 84–9, B.R.D.)
13	Christina J. Shantz / Lot D–30, Blueberry Field Subd. (Plat 84–9, B.R.D.)
14	Christina J. Shantz / Lot D–29, Blueberry Field Subd. (Plat 84–9, B.R.D.)
15	Christina J. Shantz / Lot D–28, Blueberry Field Subd. (Plat 84–9, B.R.D.)
16	Christina J. Shantz / Lot D–27, Blueberry Field Subd. (Plat 84–9, B.R.D.)
17	Christina J. Shantz / Lot D–26, Blueberry Field Subd. (Plat 84–9, B.R.D.)
18	Christina J. Shantz / Lot D–25, Blueberry Field Subd. (Plat 84–9, B.R.D.)
19	Salvatore A. Bianchi / Lot D–24, Blueberry Field Subd. (Bk 44, Pg 566, B.R.D.)
20	Bethel Native Corp. / Lot 26, USS 4117 (I.C. No. 1203)
21	Barbara C. Anvil / Lot 5, S13 & Lots 1–2, S24, T8N, R72W, S.M. (Certificate No. 50–96–0247)
22	Bethel Native Corp. / Lot 3, S24, T8N, R72W, S.M. (I.C. No. 142)
23	Mary Charles / Lots 4–5, S 1/2 SW 1/4, S24, T8N, R72W, S.M. (Certificate No. 50–92–0326)
24	Paul Charles, Sr. / SE 1/4, S23, T8N, R72W, S.M. (Certificate No. 50–84–0138)
25	Yukon–Kuskokwim Health Corp. / Tract A, Kasayuli Subd. (Plat 96–23, B.R.D.)
26	Bethel Native Corp. / Lot 1, S14 & Lot 1, S23, T8N, R72W, S.M. (I.C. No. 142)
27	City of Bethel / Lots 1–4, S13, T8N, R72W, S.M. (Quitclaim Deed, Bk 34, Pg 815, B.R.D.)
28	Bethel Native Corp. / Lot 7, S12, T8N, R71W, S.M. (I.C. No. 142)
29	U.S.A.– F.A.A. / Parcel B, F.A.A. Real Estate Drawing ALD–BET–040.001 (dated 2–8–95)
30	U.S.A.– F.A.A. / Parcel C1 (Plat 95–11, B.R.D.)
31	U.S.A.– F.A.A. / U.S. Survey No. 4117, Portion of Lot 26 (I.C. No. 1203)

PROPERTY STATUS

Parcel Number	Area	Grantor	DOT & PF Interest	Date Acquired	Acquired Under A.I.P. No.
Tract I	1053.88 ac±	United States of America	Fee (Surface)	08/20/63	BK 14, PG 187, B.R.D.
Tract III	21.23 ac±	Bethel Native Corporation	Fee (Surface)	06/04/80	D03132 BK 28, PG 431, B.R.D.
		Calista Corporation	Fee (Subsurface)	06/04/80	D03132 BK 28, PG 431, B.R.D.
Parcel 5	0.17 ac±	N/A	Not to be Acquired	N/A	N/A
Parcel 6	47.59 ac±	Mary Charles	Fee (Surface)	7/06/98	BK 80, PG 239, B.R.D.
Parcel 7	0.13 ac±	Paul Charles, Sr.	Fee (Surface)	7/06/98	BK 80, PG 234, B.R.D.
Tract IV	71 ac±	To be Acquired	To be Acquired	To be Acquired	To be Acquired
Tract V	9 ac±	To be Acquired	To be Acquired	To be Acquired	To be Acquired

SCALE: 1" = 1000'
1000' 0 1000'

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05

By: [signature] DATE: 7/13/05
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 04-AAL-211-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature]
H.M. (BUTCH) DOUTHIT, P.E. DESIGN SECTION CHIEF

APPROVED: for [signature]
H.M. (BUTCH) DOUTHIT, P.E. PROJECT MANAGER

DATE X/XX/XX
DESIGN XXX
DRAWN XXX
CHECKED XXX

BETHEL AIRPORT

AIRPORT LAYOUT PLAN
AIRPORT PROPERTY MAP

SHEET 13 OF 15

Date Plotted:
Plot Ratio and Layout: project.04\041147_Civil\4147-property, 1=40, 06/07/05 at 15:24 by cdb
File: XREF: 4147DESIGN, 4147SURVEY, BORDER, PROPERTY PLAN

A. PURPOSE

This Narrative Report is included with the Airport Layout Plan (ALP) for Bethel, Alaska, in accordance with Federal Aviation Administration (FAA) Airport Design Advisory Circular (AC)150/5300-13, Change (CHG) 8, Appendix 7. All construction items are in accordance with FAA AC 150/5300-13CHG6. The rationale for improvements to the Bethel Airport is outlined in this narrative report.

B. INTRODUCTION

The City of Bethel is located at 60 degrees 47 minutes North Latitude and 161 degrees 45 minutes West Longitude within the Yukon Delta National Wildlife Refuge of Alaska. The city is approximately 400 air miles west of Anchorage, 160 miles northwest of Dillingham, and 160 miles southeast of Emmonak. The community sits on the delta of the Yukon and Kuskokwim Rivers, approximately 86 miles upstream from the mouth of the Kuskokwim River. Bethel is the largest community in the region.

First established by Yupik Eskimos who named the village "Mumtrekhlogamute" meaning, "Smokehouse People," Bethel is strategically located for trade between the surrounding communities of the region. Incorporated in 1957, Bethel is now a second class city in an unorganized borough and local government consists of an elected mayor and city council. The city manager, appointed by the mayor and the city council, manages and oversees daily governmental activities. As the regional hub for 56 communities, Bethel provides transportation, medical care, food, fuel and other services for the lower Yukon-Kuskokwim region.

C. AIRPORT USAGE AND FLEET MIX

The Alaska Aviation System Plan (AASP) classifies Bethel Airport as a "regional class" airport. A regional class airport is defined as, "a primary intrastate access point to a region of Alaska and to a regional population center with a population over 1,000. A regional class airport serves as a significant transfer or transshipment point to the rest of the region." This classification is not expected to change in the 20-year planning period.

Aircraft operations at the airport support passenger traffic, medical evacuations, and mail and cargo distribution. The passenger and cargo operators listed in Table 1 provide air service to the airport.

Table 1
Airlines and Air Taxi Operators Serving Bethel

Alaska Airlines, Inc.	Larry's Flying Service
Arctic Circle Air	Northern Air Cargo
Camai Air, Inc.	ERA Aviation
D&G Express, Inc.	Yukon Aviation
Doyle, Monte	Frontier
Hageland Aviation Hangar One Air, Inc.	

As a regional hub airport, the transportation demand at Bethel is highly influenced by population growth in the air service area. Population in Bethel's air service area has been growing at about 2.2 percent per year since 1990. Bethel's total wage employment grew between 1992 and 1995. Economic growth indicates a stable if not growing demand for aviation. Although public sector employment fell, private sector employment compensated for the decline. The largest gains were made in retail trade, transportation, communications, utilities, finance, insurance, and real estate.

Commuter enplanements have grown most significantly during the 1990s. The result of this growth is likely due to a combination of factors, including the increase in small carriers such as ERA, Frontier, and PenAir entering the Bethel-Anchorage market and a decrease in air taxi enplanements due to the requirement that to carry mail, carriers must be certificated. Enplanements on both large certificated and commuter carriers have also grown. Of note, however, is the significant growth that has occurred in enplanement activity in the commuter carriers, which has grown by 30,174 enplanements (64 percent) since 1987. This growth is likely attributed to the economics of the aviation market in the Bethel air service area. Overall, passenger enplanements (the number of people departing the airport by plane) reported between 1987 and 1995 have grown approximately 64% from 76,315 to 115,522.

Mail and freight volumes are reported to the US Department of Transportation. Mail is carried on scheduled services to Bethel. Mail volumes have fluctuated widely between 803 tons in 1990 and 307 tons in 1987. On July 14, 1997, the U.S. Postal Service (USPS) established a two-year demonstration program in the Yukon-Kuskokwim region to deliver surface class mail to several communities by hovercraft. Bethel serves as the distribution center for this activity. After the demonstration program, the USPS contracted the hovercraft service to carry all non-priority rate mail, with priority mail still being delivered by air. Air freight volumes also have fluctuated widely from 4,725 tons in 1991 to 4,725 tons in 1991 to 1,466 tons in 1994.

The FAA categorizes five types of operations: air taxi, commuter, general aviation (local or itinerant), air carrier, and military. Several air taxi, commuter, and air carrier operators are based at Bethel. With 232 based aircraft, Bethel serves as a base for many GA and military aircraft. The current fleet mix at the Bethel airport is listed in Table 2 with their associated airport reference code, approach speeds, dimensional and performance characteristics.

Table 2
Current Fleet Mix

Aircraft	ARC[1]	Approach Speed (knots)	Length (ft)	Wingspan (ft)	MTOW[2] (lbs)	Max Range (nautical miles)
Cessna 150-208	A-I	<91	23-27	32-35.8	1,600-3,600	625-900
CASA C-212	A-II	<91	52	66	17,000	1,447
Dash 7-100	A-III	<91	80	93	43,000	1,170
Dash 8-300	A-III	<91	73	85	41,100	820
Beech Baron 58TC	B-I	<91	29	37	6,200	1,575
Piper Navajo	B-I	91-121	32	40	6,200	1,065
Beechcraft 1900	B-II	91-121	57	57	16,600	1,500
DHC-6	A-II	91-121	52	65	12,500	920
Fairchild Metroliner	B-II	91-121	59	57	16,500	1,115
Saab 340	B-II	91-121	64	70	29,000	935
DC-6	B-II	91-121	105	117	104,000	N/A[3]
B 727-100	B-III	121-141	96	93	169,000	2,255
B 727-200	C-III	121-141	96	93	209,500	2,255
B 737-200 Combi	C-III	121-141	100	93	115,500	2,140
B 737-300	C-III	121-141	109	94	135,000	2,850
B 737-400	C-III	121-141	109	94	150,000	2,850
L 188A Combi	C-III	121-141	105	99	116,000	N/A
L 100-30 (C 130)	C-IV	121-141	97	132	155,000	4,250

(1) Airport Reference Code, (2) Maximum takeoff weight, (3) Not ascertained
Source: Compiled by HDR Alaska, Inc. July 1998

The aircraft fleet mix based at Bethel consists of over 90 percent single engine propeller planes, 7 percent multi-engine propeller planes and about 2 percent helicopters. Several military planes have also been historically based at Bethel. It is assumed that the existing fleet mix will continue through the planning period. There may be some shift toward multi-engine aircraft as more and more of the regional airports served by Bethel upgrade their airports to the 3,000 to 3,300 foot lengths recommended for community class airports.

Though many more operations are recorded for small aircraft than for large aircraft at Bethel it is important to note that FAA standards require that airports be designed to accommodate the most demanding airplane (critical aircraft) that regularly uses the airport. Regular use is defined as at least 250 operations (takeoffs and landings) per year (FAA, AC 150/5325-4A, Runway Length Requirements for Airport Design). Historically, the Boeing 737 has provided the overwhelming majority of the departures among large aircraft at the Bethel airport. In 1995 the 737-200C performed 1,181 operations. To accommodate the anticipated change in fleet mix over the next 20 years, the CIII (Boeing 737-200C) aircraft has been selected as the critical design aircraft for ultimate or long-term facility development.

D. AVIATION DEMAND FORECASTS

By estimating the elements of demand, compared over time, in relation to the capacity of the airport facilities, the timing of when new or expanded airport facilities will be needed can be identified. To prepare the forecasts for the Bethel Airport, available historic and current aviation activity information, including number of operations, passenger enplanements, fleet mix, cargo and mail volumes have been assembled. The aviation forecasts have been prepared to reflect expected changes and socioeconomic characteristics in the region. Traffic demand factors include an analysis of regional aviation trends to villages supported by Bethel, or Bethel's Air Service Area. Aircraft operations include the number of arrivals and departures at the airport. There are two types of operations. Local operations are performed by aircraft that operate in the local traffic pattern or within sight of the airport, are known to be departing for, or arriving from, flight in local practice areas located within a 20-mile radius of the airport, or execute simulated instrument approaches or low passes at the airport. All other aircraft operations are itinerant operations. While itinerant operations have shown modest growth (21 percent over 6 years), commuter and air taxi operations have increased by 60 percent, to more than 70,000 in 1996. General aviation has also shown steady growth. Table 3 provides an estimate of aircraft operations (the number of aircraft landing at and departing at the airport) and enplanements for 5, 10, 20 years into the future.

Table 3
Bethel Air Forecasts

Activity	1998 (Estimated)	2000 (Projected)	2010 (Projected)	2020 (Projected)
Operations	121,850	141,100	157,500	190,400
Enplanements	121,552	132,500	149,800	175,800

Source: Bethel Airport Master Plan (HDR, 2002)

Date Plotted:
Plot Ratio and Layout:
File: project.04\04147_Civil\4147-narrative, lsl, 06/07/05 at 15:26 by cdb
XREF: 4147-BD01 VIEW: NARRATIVE1, NARRATIVE2

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 7/13/05
By: _____ DATE: 7/13/05
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-600
F.A.A. AIRSPACE REVIEW NUMBER: 04-AAL-211-NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
APPROVED: _____ H.M. (BUTCH) DOUTHIT, P.E. DESIGN SECTION CHIEF
APPROVED: _____ H.M. (BUTCH) DOUTHIT, P.E. PROJECT MANAGER

DATE
DESIGN DJS
DRAWN JWF
CHECKED

BETHEL AIRPORT
AIRPORT LAYOUT PLAN
NARRATIVE REPORT

SHEET 14 OF 15

E. AIRPORT DEVELOPMENT RATIONALE

Federal and state authorities prescribe or recommend airside standards (federal) or guidelines (state) to which runways, safety areas, taxiways, aprons, lighting, object free areas (OFAs), obstacle free zones (OFZs), and runway protection zones (RPZs) should be developed. The FAA standards are based on the aircraft design group and critical aircraft using the airport. State recommendations are based largely on airport classification. The following is a summary of findings and proposed improvements based on identified existing conditions at the Bethel airport.

1. Runway 18–36: The existing length of 6,400 feet and width of 150 feet is adequate to accommodate expected types of aircraft use with stage lengths up to 500 miles. The existing RSA width of 300 ft does not meet FAA standards and should be increased to 500 ft. The existing RSA length of 8,400 ft meets current FAA standards. The length, width, and lighting of Runway 18–36 are expected to remain adequate for the duration of the planning period.

2. New Parallel Runway: The current Bethel Airport Master Plan recommends the existing crosswind Runway 11–29 be lengthened to 3,200 feet within the next five years. However, a seasonal wind study indicates that an additional parallel Runway 1R–19L would provide a greater safety margin than would a crosswind runway for small aircraft takeoffs and landings during winter months when winds are stronger and more variable. This parallel runway would provide a safer means for improving airport capacity during snow removal operations and other closures on Runway 18–36, and is given priority over crosswind runway relocation and extension. The parallel Runway 1R–19L is planned for construction within the next five years. The crosswind Runway 11–29 extension/relocation is reprioritized as a long–term improvement.

3. Runway 1R–19L: The new parallel Runway 1R–19L will be 4,000 ft long by 75 ft wide, and will be classified as ARC B–II. It will be located 700 feet east of the existing Runway 18–36 centerline which will allow simultaneous Visual Flight Rules (VFR) operations. The 4,000–ft length is adequate for B–II aircraft with 10 or more passenger seats, and will accommodate over 95% of the estimated fleet mix.

4. Runway 11–29: In the near–term, the existing 1,850–ft Runway 11–29 will remain operational to provide necessary wind coverage for small aircraft (ARC A–I). The crosswind runway also provides flexibility for air traffic control purposes, additional airfield capacity, and provides a crosswind training capability. Ultimately, Runway 11–29 should be shifted east of Runway 18–36, with its length increased to 3,200 feet to accommodate ARC B–II aircraft that require crosswind coverage. This would be a long term improvement (5–20 years). A 3,200 ft crosswind runway would meet FAA criteria for runway length (80% of primary runway length) since a primary runway of at least 4,000 feet will be available for operations. The existing width of 75 feet is adequate.

The Runway 11–29 RSA should be lengthened to 300 feet beyond the runway ends and the width increased to 150 feet. The ultimate Runway 11 threshold has been located such that its placement remains outside all other runway and taxiway safety areas. Land should be acquired to the east of Runway 11–29 to allow for ultimate extension or relocation of the runway and to include the future runway protection zone (RPZ) and building restriction line (BRL) within the airport boundary. This will provide adequate control to eliminate obstructions and prevent development within the RPZ area and within the BRL.

The ultimate Runway 11–29 location is similar to what was approved in the 2002 Airport Master Plan and the 2004 Airport Development Re–evaluation. However, an Environmental Assessment (EA) is programmed to identify and alleviate environmental, safety and design constraints. Prior to any property acquisition, an EA and updated ALP will be submitted to FAA for approval.

5. Taxiways: Taxiways "D", "G" and "O" (extension of "C" to the east) should be extended from Runway 18–36 to the parallel Runway 1R–19L when it is constructed. Taxiway "J", along the north edge of the existing south general aviation apron, should be extended west to the threshold of Runway 11 to increase its capacity. In the long term, Taxiway "M" should be extended east from Taxiway "C" through Runway 18–36 to Runway 1R–19L to provide an additional exit taxiway and improve capacity.

6. Pavement strength: The existing pavement strength is adequate for Runway 18–36. A new paved parallel Runway 1R–19L should be capable of supporting 30,000 pound dual–wheel aircraft to accommodate the expected aircraft usage.

7. Lighting and navigational aids: The new parallel Runway 1R–19L should have MIRL and REIL and PAPI's installed. Future navigational aids should include radar and GPS capability for the airport.

8. Aprons: Apron space needs to be expanded to provide separation of passenger, cargo, and general aviation activities. This would include more tie–down space for based and itinerant aircraft. The total apron space required to meet the 2020 year demand is estimated at: 1,465,000 sf for air taxi operations, 990,000 sf for general aviation, 265,000 sf for commuter, 300,000 sf for cargo operations, and 100,000 sf for air carrier passenger operations. To meet the 20–year demand, 1,085,000 sf and 735,000 sf should be added for air taxi and general aviation aircraft, respectively.

9. Fencing: The airfield perimeter/security fencing extends around the entire airfield to provide complete security of the Air Operations Area (AOA) and to comply with FAR Part 107.

10. Airspace, Navigational Aids, and Approach Surfaces: PAPI's and REIL's should be installed on future Runway 1R–19L, and on the ultimate Runway 11–29 relocation/extension. Ultimate development would include GPS navigational aids and radar capability.

11. Lighting: Existing Runway 18–36 has HIRL. Future Runway 1R–19L and ultimate Runway 11–29 should have MIRL. All existing and future taxiways should have MITL.

12. Landside Terminal Complex: The terminal complex requires enlargement and upgrading to separate cargo and passenger activities and to improve automobile access and parking.
Lease lot space should be reserved for future development of a main passenger terminal building if the decision is made to pursue that action.

G. PROPERTY STATUS

The Bethel Airport is situated upon 1,056 state–owned acres that are managed by the Department of Transportation and Public Facilities. Runway 11–29 relocation and extension will require acquisition of approximately 71 acres of additional land.

H. COMMUNITY INVOLVEMENT

The Alaska DOT&PF Planning Section have informed and updated the residents of Bethel of the proposed airport development through written correspondence, newsletters, and community meetings held in Bethel.

I. ENCROACHMENTS INTO PART 77 SURFACE

There are two lighted radio towers that penetrate into the horizontal surface west of the airport. Also, several R/W 18–36 primary surface ground obstructions have been identified, but there are no penetrations to the FAR Part 77 approach surfaces to any of the four runway ends.

Table 4 lists existing facilities and future requirements in 5–, 10–, and 20–year increments.

Table 4
Bethel Airport Development

Component	Year Existing–2005	2009	2014	2024
Runway 18–36 (1L–19R)				
Length (ft)	6,400	6,400	6,400	6,400
Width (ft)	150	150	150	150
Pavement strength (lbs)				
Single–wheel aircraft	90,000	90,000	90,000	90,000
Dual–wheel aircraft	112,000	112,000	155,000	155,000
Single tandem	142,000	142,000	155,000	155,000
Dual tandem	210,000	210,000	210,000	210,000
1R–19L				
Length (ft)	––	4,000	4,000	4,000
Width (ft)	––	75	75	75
Pavement strength (lbs)				
Single–wheel aircraft	––	12,500	12,500	12,500
Dual–wheel aircraft	––	30,000	30,000	30,000
Runway 11–29				
Length (ft)	1850	1850	3,200	3,200
Width (ft)	75	75	75	75
Pavement strength (lbs)				
Single–wheel aircraft	––	––	––	––
Dual–wheel aircraft	––	––	––	––
Air Carrier and Air Cargo				
Air carrier passenger positions	2	2	2	2
Square footage	100,000	100,000	100,000	100,000
Air carrier air cargo positions	3	4	5	6
Square footage	200,000	200,000	250,000	300,000
Commuter/air taxi aircraft positions	14	17	20	25
Square footage	145,000	185,000	215,000	265,000
Passenger terminal building(s) (sf)	11,600	13,600	14,600	16,500
Cargo terminal builllding(s) (sf)	34,700	41,000	47,000	55,700
Air Taxi				
Based aircraft tiedowns	132	152	163	197
Square footage	380,000*	910,000	975,000	1,190,000
Itinerant aircraft tiedowns	50	50	50	55
Square footage	*	250,000	250,000	275,000
General Aviation				
Based aircraft tiedowns	88	98	105	125
Square footage	255,000*	727,500	777,500	885,000
Itinerant aircraft tiedowns	25	25	25	30
Square footage	*	87,500	87,500	105,000

*Apron spaced shared between based and itinerant aircraft